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ABSTRACT:

PURPOSE: To efficiently form fine slit beam, by providing a laser beam source, a slit projection optical system for forming laser beam into a slit shape and a means for rotating the slit beam around the apex of the cornea.

CONSTITUTION: After alignment is finished, laser beam is allowed to irradiate. The laser beam emitted from a laser head 1 passes through a band-pass filter 2 and is subsequently turned in its direction by a mirror 3 to be incident to a galvano-mirror 4. By vibrating the galvano-mirror 4, slit like scanning is performed by the laser beam. Next, the laser beam is turned in its direction by a prism 6 through a image rotator 5 and subsequently condensed to an anterior part by a condensing lens 7. When the laser beam is incident to the anterior part, scattering is generated by the cornea and the eye lens and this scattering beam is condensed by an

imaging lens 22 to be formed into an image on the beam receiving surface 23 of a CCD camera. The taken cross-sectional image is stored in the memory connected to the CCD camera to be displayed on a monitor TV. The laser beam emitted from a beam source is enlarged to a proper size by an expander optical system and subsequently contracted only in one direction by a cylindrical lens and formed into a slit shape to be allowed to irradiate.h

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OPHTHALMOLOGICAL DEVICE

L10: 1 of 8

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ABSTRACT:

PURPOSE: To effectively lead a light flux from a light source to an eyeground through a columnar lens.

CONSTITUTION: An infrared beam of light emitted by a laser diode 9 is image formed by a convex columnar lens 8 on an image formation surface P3 as a linear flux image stretching perpendicularly to the plane in which illustration is made, image formed in a dot form in the center of a slit provided in a mirror 4, reflected by a galvanometric mirror 2, and projected on the eyeground Er as a linear flux image upon dot-form image formation on the pupil Ep of the eye to be inspected. When the galvanometric mirror 2 is rotated, the eyeground Er is scanned in one direction by the linear flux image centering on the image formed position on the pupil Ep. The reflected beam of light returns following the same route,